



AIRS Science Software Update

V2.7 and V3.0 Software Releases

Steven Friedman

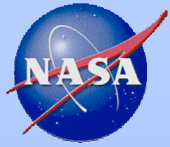
Project Element Manager

AIRS Science Processing System

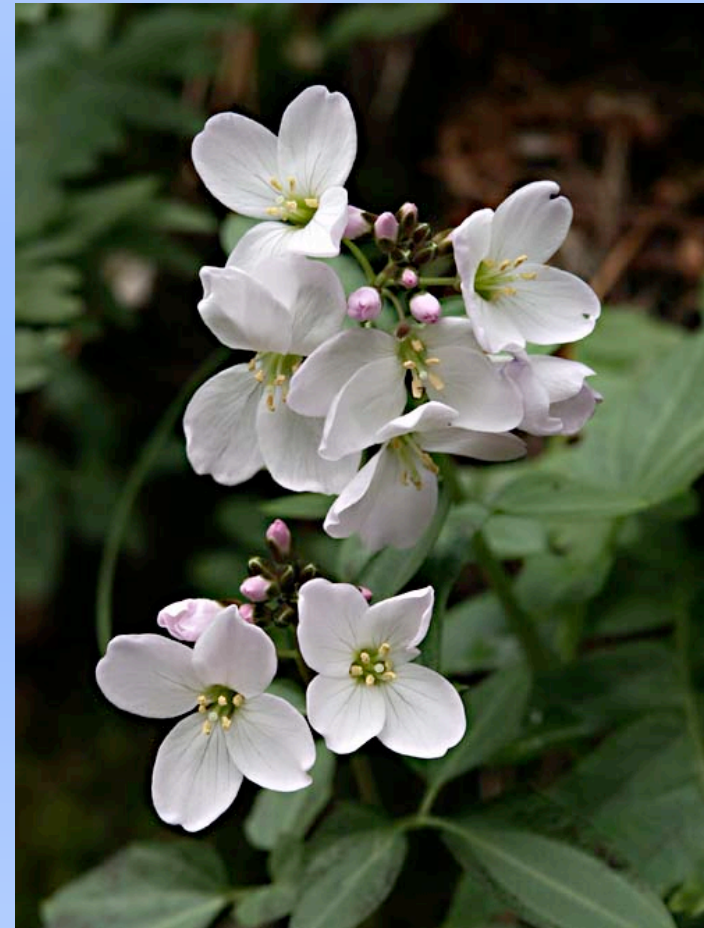
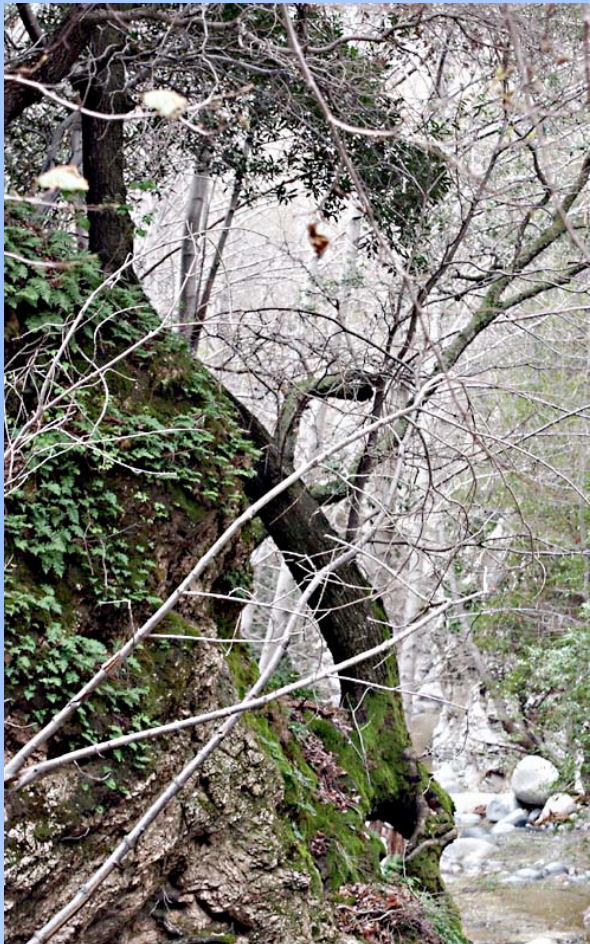


February 25, 2003





President's Day Weekend

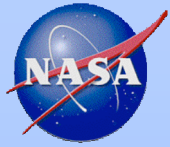


February 25, 2003

AIRS Science Software Update

1





President's Day Weekend



February 25, 2003

AIRS Science Software Update

2





- **Status of V2.7**
 - Delivery Update
 - Known Liens
- **Status of V3.0**
 - Convergence Activity
 - Release Planning
 - Schedule
 - Liens?
- **AIRS Standard Products File Naming Proposal**
- **Future Deliveries**





V2.7 Status – Release History



- **V2.7: Operational Level 1B Products**

- V2.7 Features

- Operational Versions through Level 1B
 - Prototype versions of Level 2

- V2.7 Product History

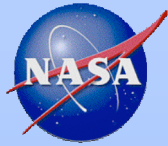
- Development began during July 2002, ended during November 2002
 - Complete testing and packaged for delivery, conducted Delivery Readiness Review on 1/30/03
 - Delivered to GSFC and NOAA on 1/31/03

- V2.7 Operational Status

- Operational at the AIRS TLSCF since 1/21/03
 - Operational at NOAA RBD Facility expected by 3/3/03
 - Planned operational status at GSFC DAAC on 3/3/03
 - Planned delivery to Direct Broadcast Community ~4/1/03

Level 1A, Level 1B
Level 1B Browse
Match-up
Daily VegMap
Multi-day VegMap
Level 2, Level 2 Browse

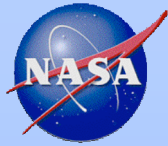




V2.7 Status – Data Release

- **AIRS, AMSU-A and HSB Level 1B Data to be made available to the public via the GSFC DAAC**
 - Public access to Level 1B data will be available via:
 - EOS Supported Services
 - Data Gateway (EDG)
<http://redhook.gsfc.nasa.gov/~imswww/pub/imswelcome/>
 - GSFC DAAC supported Services
 - Data Pool (4 TB allocated to AIRS, approximately 4 mos. Storage L1B)
<http://daac.gsfc.nasa.gov/data/datapool>
 - Web-based Hierarchical Ordering Mechanism (WHOM)
<http://daac.gsfc.nasa.gov/data/dataset/AIRS>
 - Documentation and Press Release announcement being developed
 - Restricted access to Level 2 prototype products via EDG Hidden Client
 - No public access
 - Must access via EDG Hidden Client approved user to access data
<http://redhook.gsfc.nasa.gov/~imswww/hidden/imswelcome/index.html>
- **V2.7 will also be released to the Direct Broadcast community**

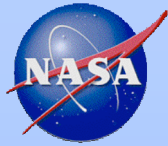




V2.7 Status – Known Liens

- **V2.7 PGEs are performing according to specification and are ready for delivery. All liens are minor and do not impact delivery.**
- **Liens**
 - Antenna temperature side-lobe correction not implemented (AMSU, HSB)
 - Anomalous values at the beginning of each Vis/NIR swath, Channel 4 only (AIRS Vis/NIR)
 - Scattered anomalously high values generated in the Level 1B AMSU Browse products for Channel 1(AMSU)
 - Possible geolocation offset by approximately 4 km in the cross-track direction (AIRS/IR)
 - Level 2 PGE functions, but is not considered operational – only to be used for flow testing





3.0 Status – Release Plans

- **V3.0: Operational Level 2 Products!**

- V3.0 Features

- Operational Versions of all PGEs:

- V3.0 Product History

- Development began during November 2002, slated to end 3/11/03
 - Planned delivery to GSFC and NOAA on 5/13/03
 - Planned public release on 6/11/03

- V3.0 Operational Status

- Convergence Activity began 1/27/03, ended 2/14/03
 - First V2.8 build installed in TDS: V2.8.0.0 – 2/4/03
 - V2.8 build used for Science Team Meeting: V2.8.1.3 – 2/12/03
 - First V3.0 build planned: 3/11/03

Level 1A
Level 1B
Level 1B Browse
Match-up
Daily VegMap
Multi-day VegMap
Level 2
Level 2 Browse

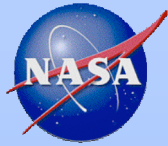




V3.0 Status – Convergence Activity

- **Achieve *convergence* between JPL and GSFC generated Level 2 retrievals**
 - Retrieval products had differed significantly – no clear understand of how, why
 - Convergence was essential to enable us to move forward
- **Impact**
 - Sung-Yung Lee and John Blaisdell evaluate all proposed work
 - Some packages were delayed for a few weeks
 - Most packages will be incorporated into V3.0 after convergence activity concludes
 - Some packages will be deferred until after V3.0
- **Status**
 - Convergence builds (V2.8.0.0 and V2.8.1.3) completed
 - Products currently being evaluated

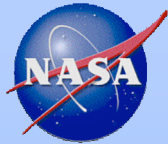




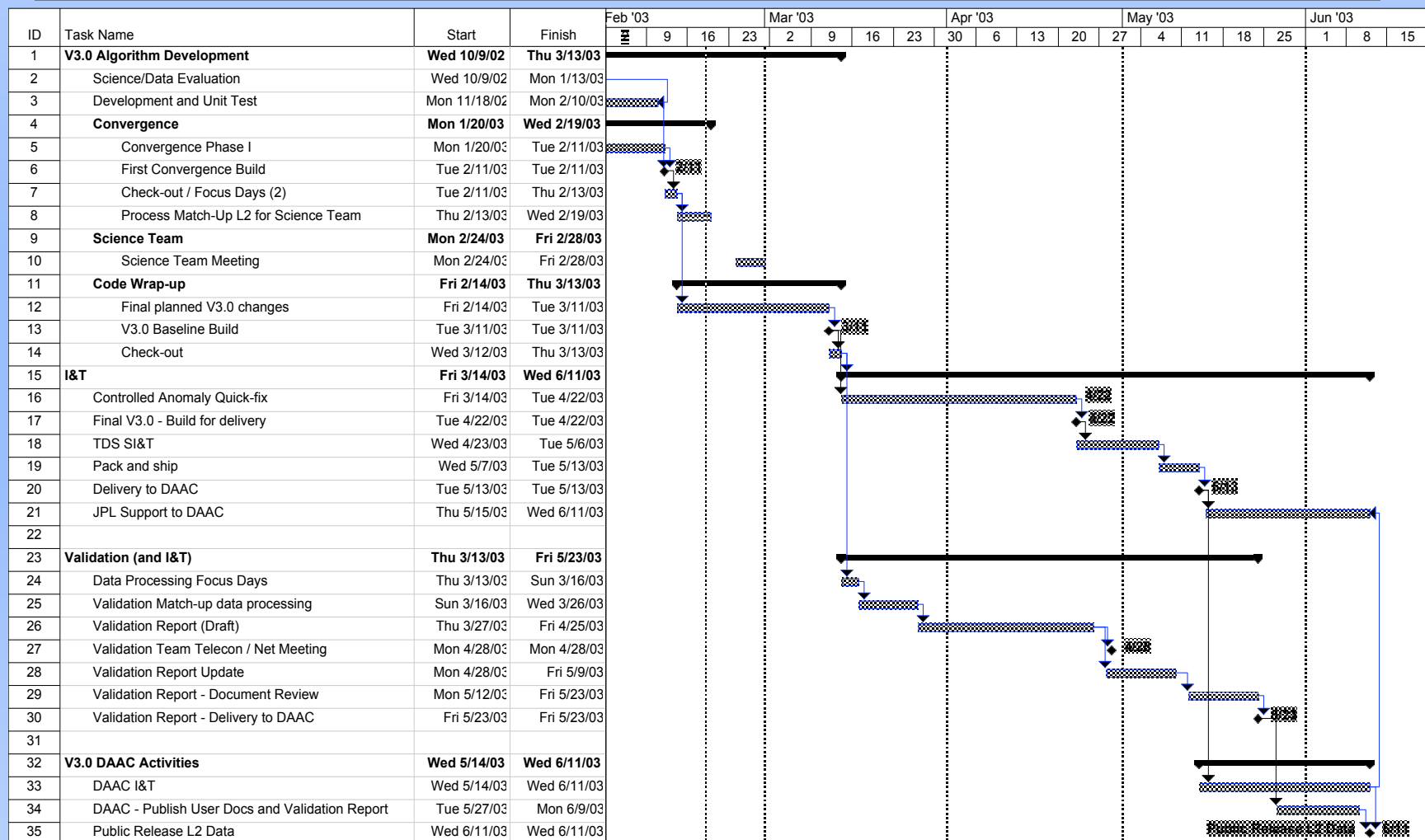
V3.0 Status – Data Release

- **With V3.0, Level 2 Products to be publicly available**
 - Level 2 Standard Retrieval Product
 - Level 2 Cloud-Cleared Radiance Product
 - Level 2 Support Product
- **All Level 1B and 2 Standard Products will be available**
- **V3.0 will also be released to the Direct Broadcast community**





V3.0 Status – Schedule

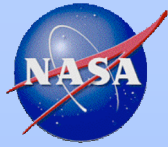


February 25, 2003

AIRS Science Software Update

10

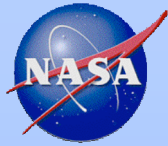




V3.0 Important Milestones

V3.0.0.0 Build:	March 11
JPL I&T:	March 14 – April 22
Validation DP:	March 13 – March 26
Final V3.0 Build:	April 22
Validation Report Draft:	April 25
Final Validation Report	May 9
V3.0 Delivery to DAAC	May 13
Validation Report to DAAC	May 23
DAAC I&T	May 14 – June 11
V3.0 Operational, Live!	June 11





V3.0 Status – Liens?

- **Known Liens**
 - Antenna temperature side-lobe correction not implemented (AMSU, HSB)
- **Additional liens will be identified as a function of:**
 - Validation Campaign
 - Science Team assessments

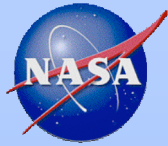




Future Deliveries

- **Post V3.0, deliveries to DAAC and NOAA every 6 months**
 - V3.0 + 6 mo.
 - Anomaly corrections
 - Microwave scan angle effects
 - Improved Level 2 PGE, extended capabilities
 - Level 3 (?)
 - V3.0 + 12 mo.
 - Anomaly corrections
 - Improved Level 2
 - First incorporation of NRA software additions (?)
- **Minimal lead time to make each delivery is 3 months**
 - 8 weeks I&T at JPL
 - 4 weeks I&T at GSFC






AIRS Standard Products File Naming Proposal

- **Proposal:**
 - **Add “.hdf” file extension of all AIRS Standard Products**

Before: AIRS.2003.02.10.236.L1B.AMSU_Rad.v2.7.11.2.A03042193747

After:  AIRS.2003.02.10.236.L1B.AMSU_Rad.v2.7.11.2.A03042193747.hdf
- **Rationale**
 - AIRS Standard Products do not conform to de facto file typing standards for hdf files - conformity
 - File typing improves user understanding and allows file type aware programs to handle data automatically
 - Requested by Direct Broadcast advocates
- **Impact:**
 - Minimal impact to AIRS production environments at JPL and GSFC. NOAA impact is TBD.
 - Minimal to moderate impact to current users who have scripts that key on current file naming schemas



